



# Severe Maternal Hypertension and Preeclampsia: A Roadmap to Improvement

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Atlantic Health System

## Learning Objectives

1. Describe a multidisciplinary approach to appropriately and expeditiously treat severe maternal hypertension.
2. Discuss successful strategies used within a multisite health system collaborative to treat severe maternal hypertension.

## Project Overview

Many factors have contributed to the rise in U.S. maternal mortality. While the issue has attracted a lot of attention, we've seen little substantial improvement. At Atlantic Health System, we approached severe maternal hypertension treatment with engagement, resiliency, accountability, transparency and empowerment across the entire women's health service line. This led to improved outcomes at both academic and community hospitals — translating to systemwide, sustained improvement. As a result of this house wide collaboration, timeliness to treat severe hypertension improved from 40% in 2018 to over 90% in 2021.

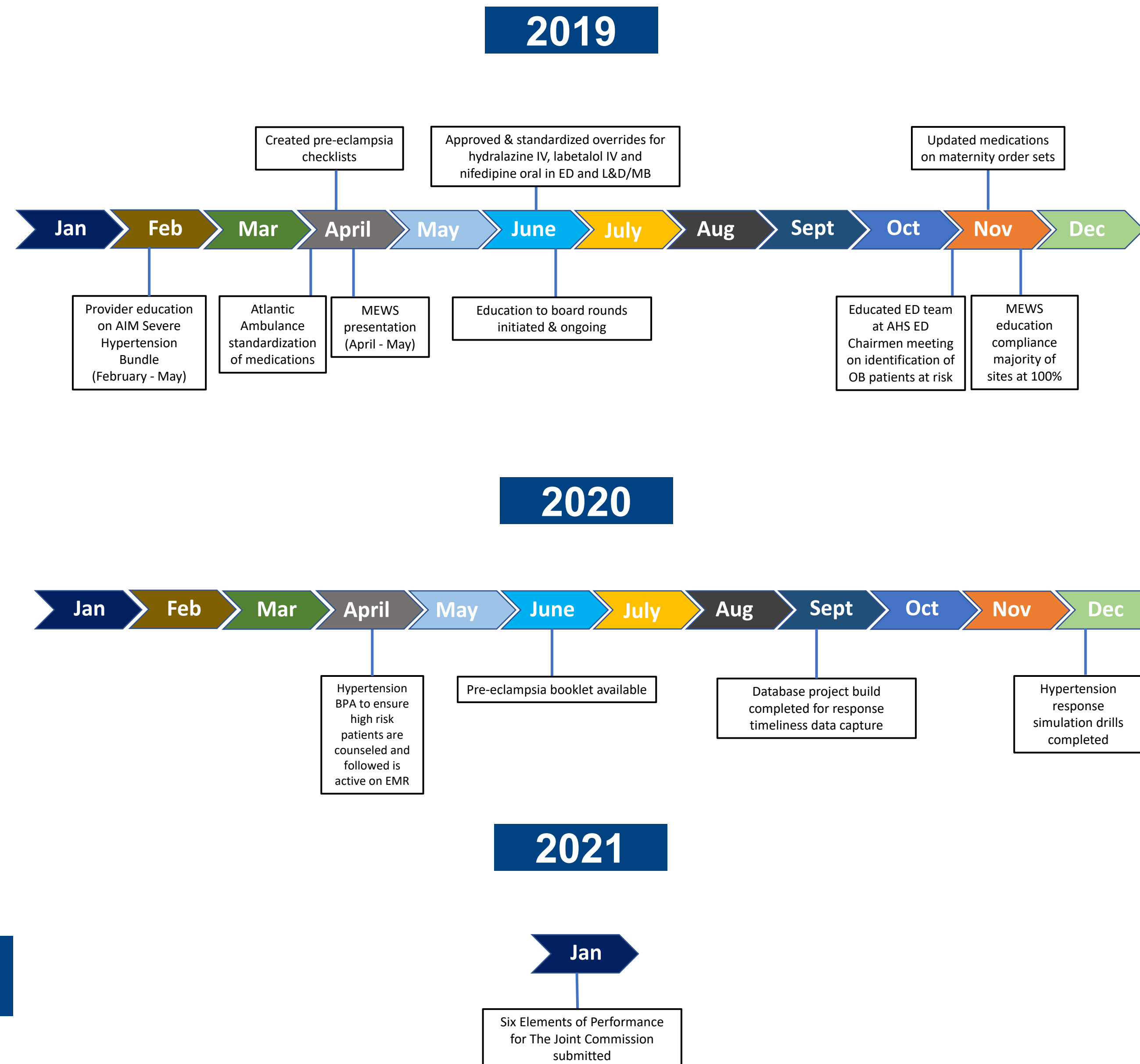
## Goal

Develop a multidisciplinary obstetric collaborative to address maternal outcomes related to severe hypertension to ensure timely intervention and management, and to continually identify opportunities for improvement.

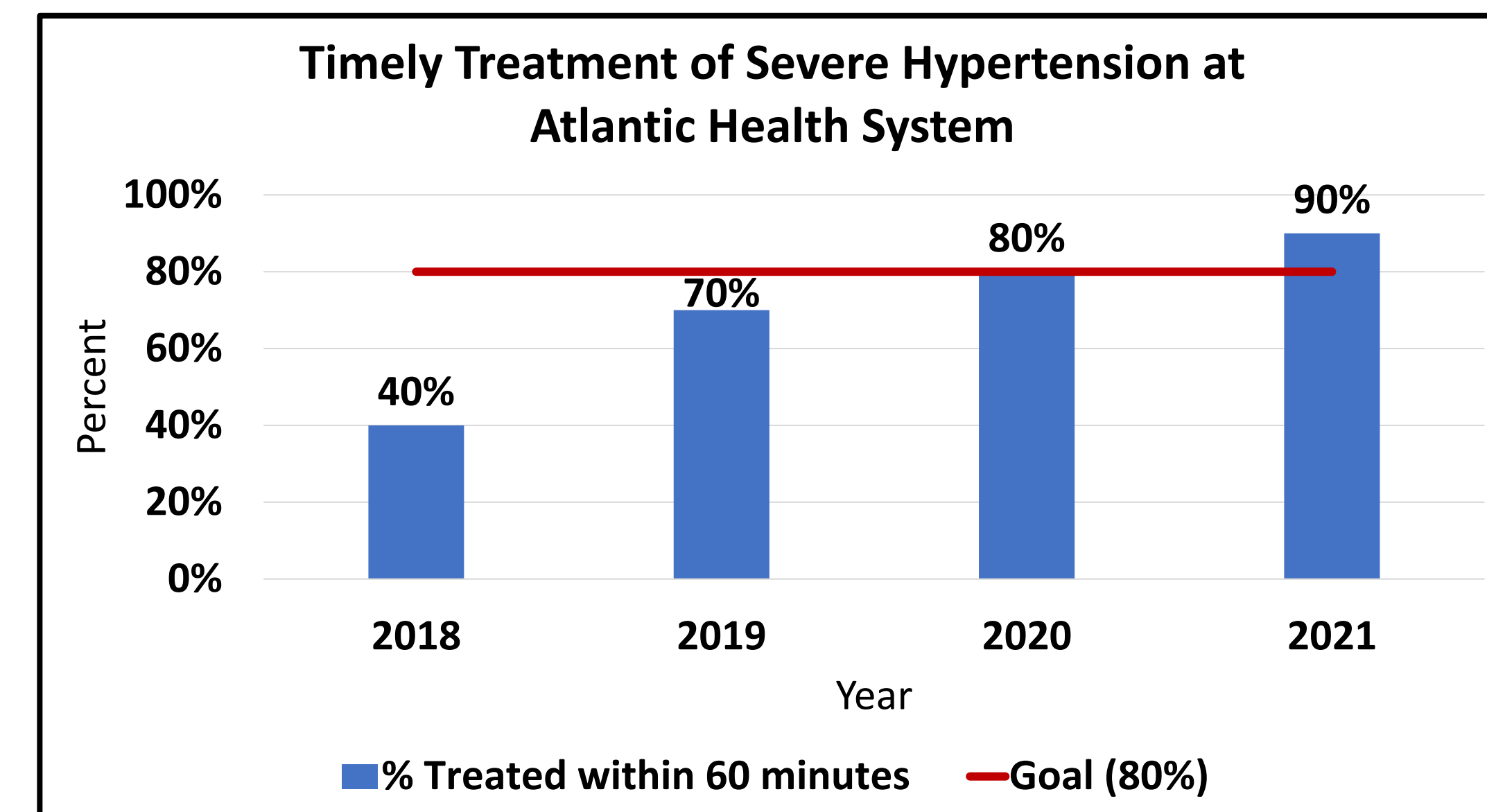
## References

1. Pregnancy Mortality Surveillance System - Pregnancy - Reproductive Health. Centers for Disease Control and Prevention. [Online] [Cited: 2 25, 2022.] <https://www.cdc.gov/reproductivehealth/MaternalInfantHealth/PMSS.html>.
2. Perinatal high reliability. Knox, G. Eric and Simpson, Kathleen Rice. 5, 2011, American Journal of Obstetrics and Gynecology, Vol. 204, pp. 373-377.
3. McGolrick, Alana. Understanding the New Joint Commission Requirements for Maternal Patient Safety. Patient Safety and Quality Healthcare. [Online] July 20, 2020. [Cited: March 1, 2022.] <https://www.psqh.com/analysis/understanding-the-new-joint-commission-requirements-for-maternal-patient-safety/>.
4. Alliance for Innovation on Maternal Health. Severe Hypertension in Pregnancy. Patient Safety Bundles. [Online] 2015. [Cited: March 1, 2022.] <https://safehealthcareforeverywoman.org/aim/patient-safety-bundles/maternal-safety-bundles/severe-hypertension-in-pregnancy-aim/>.
5. What is Preeclampsia. Preeclampsia Foundation. [Online] 2021. [Cited: August 3, 2021.] <https://www.preeclampsia.org/what-is-preeclampsia>.

## Intervention Detail



## Results



## Discussion

The goal of this project was to improve response time to treat 80% of severe-range blood pressures (new-onset systolic:  $\geq 160$  or diastolic:  $\geq 110$ ) within a timeframe of 60 minutes. As a result of this multidisciplinary approach, Atlantic Health System observed a gradual and sustained improvement in response times meeting goal by the end of 2020. Prior to implementation of this project, only 40% of severe-range blood pressures were treated within 60 minutes of recognition. By 2019, that number increased to 70%, and goal was reached in 2020 with 80% of severe-range blood pressures being treated appropriately. Our system has since surpassed the goal and by the close of 2021, 90% of patients were treated appropriately. According to the Pre-eclampsia Foundation, hypertensive crisis/pre-eclampsia accounts for 6.8% of pregnancy-related deaths in the United States. By implementing evidence-based standards recommended by The Joint Commission, we have an opportunity to impact maternal health outcomes. We have also shown that this initiative is sustainable across a multi-site healthcare organization.

Thank you to Dr. Diana Contreras and the Atlantic Health System OB Collaborative for their efforts in this project

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## Structure

Multidisciplinary team from Atlantic Health System: Academic Medical and Community Medical Centers.

- OB/GYN physician leadership
- OB/GYN nursing leadership
- Anesthesia leadership
- Senior leadership
- Quality & Patient Safety
- Information Systems Support
- Health Information Management
- Risk/Legal

## Process

To guide and support obstetric care providers and birthing facilities at Atlantic Health System in implementing evidence-based, collaborative, patient-centered practices to prevent and manage maternal outcomes.

Structure

- Administrative Support
- Key Stakeholders
- Organizational Structure

Process

- Education
- Policy Development
- Standard Protocols

Outcome

- Reporting Data
- Analyzing Trends

## Outcome

To reduce severe maternal morbidity and mortality related to obstetric hypertension among patients who give birth in an Atlantic Health System facility.



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## Public Reporting

- CMS
- Leapfrog
- Healthgrades
- US News & World Report
- The Joint Commission
- State Health Department

## Readiness

- Lecture series completed at all Atlantic Health System sites including the emergency departments
- Conduct drills yearly
- Developed written procedures for the recognition, management and treatment of severe hypertension and preeclampsia based on evidence-based guidelines

## New Joint Commission Standard

- PC.06.03.01: Reduce the likelihood of harm related to maternal severe hypertension/preeclampsia

## Recognition

- Time to BP Confirmation
- Standardized protocol for measurement and assessment of blood pressure for the peripartum inpatient
- Maternal Early Warning Signs (MEWS) alert in EMR

## Review

- Electronic database created for timely data collection and multidisciplinary review
- Reported out at system and site levels to share and discuss opportunities for improvement
- Review of severe hypertension cases

## Atlantic Health System

- 4 AHS sites with maternity care represented
- A multidisciplinary Collaborative formed to address the new standards by developing multiple interventions and processes

## Response

- Blood pressure monitoring algorithm
- Treatment algorithm
- Escalation guidelines for severe range blood pressures